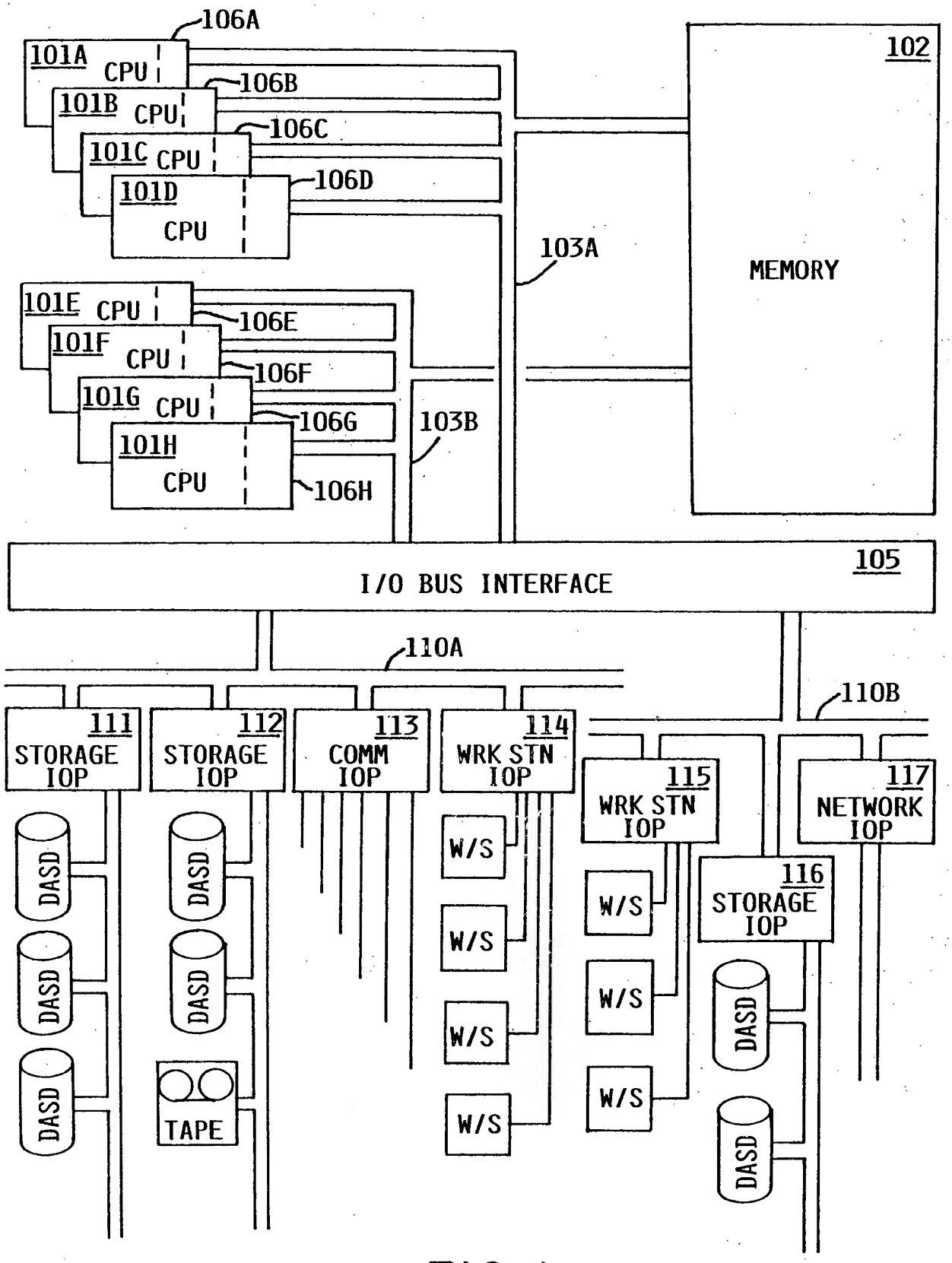
106A
101A CPU
106B
101B CPU
106C
101C CPU
106D
101D CPU
102
MEMORY
103A
101E CPU
106E
101F CPU
106F
101G CPU
106G
101H CPU
106H
103B
105
I/O BUS INTERFACE
110A
110B
111 STORAGE IOP
112 STORAGE IOP
113 COMM IOP
114 WRK STN IOP
115 WRK STN IOP
117 NETWORK IOP
116 STORAGE IOP
DASD
TAPE
W/S

FIG. 1

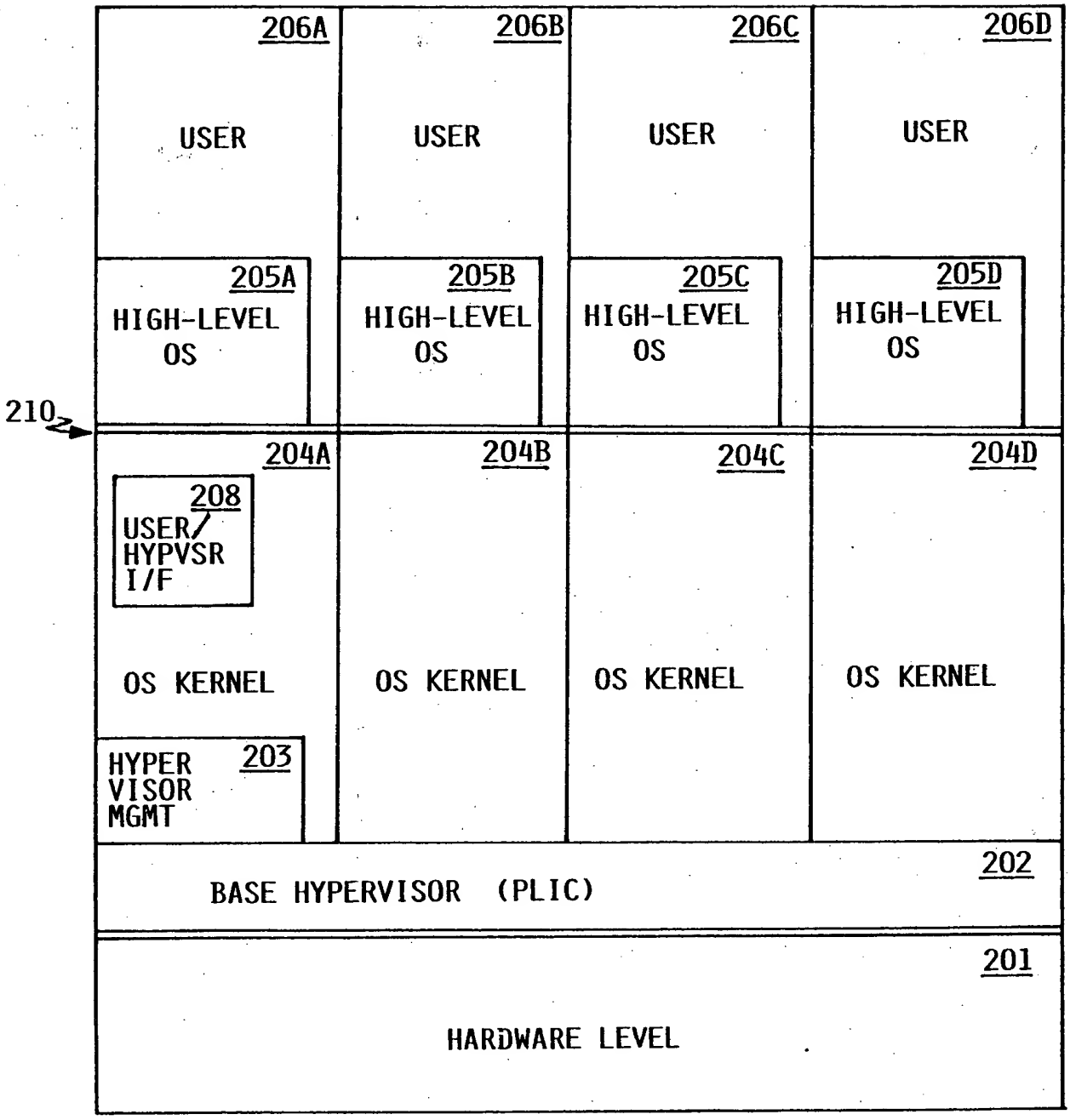
206A
206B
206C
206D
USER
USER
USER
USER
205A
205B
205C
205D
HIGH-LEVEL OS
HIGH-LEVEL OS
HIGH-LEVEL OS
HIGH-LEVEL OS
210
204A
204B
204C
204D
208
USER/ HYPVSR I/F
OS KERNEL
OS KERNEL
OS KERNEL
OS KERNEL
HYPER VISOR MGMT
203
BASE HYPERVISOR (PLIC)
202
HARDWARE LEVEL
201

FIG. 2

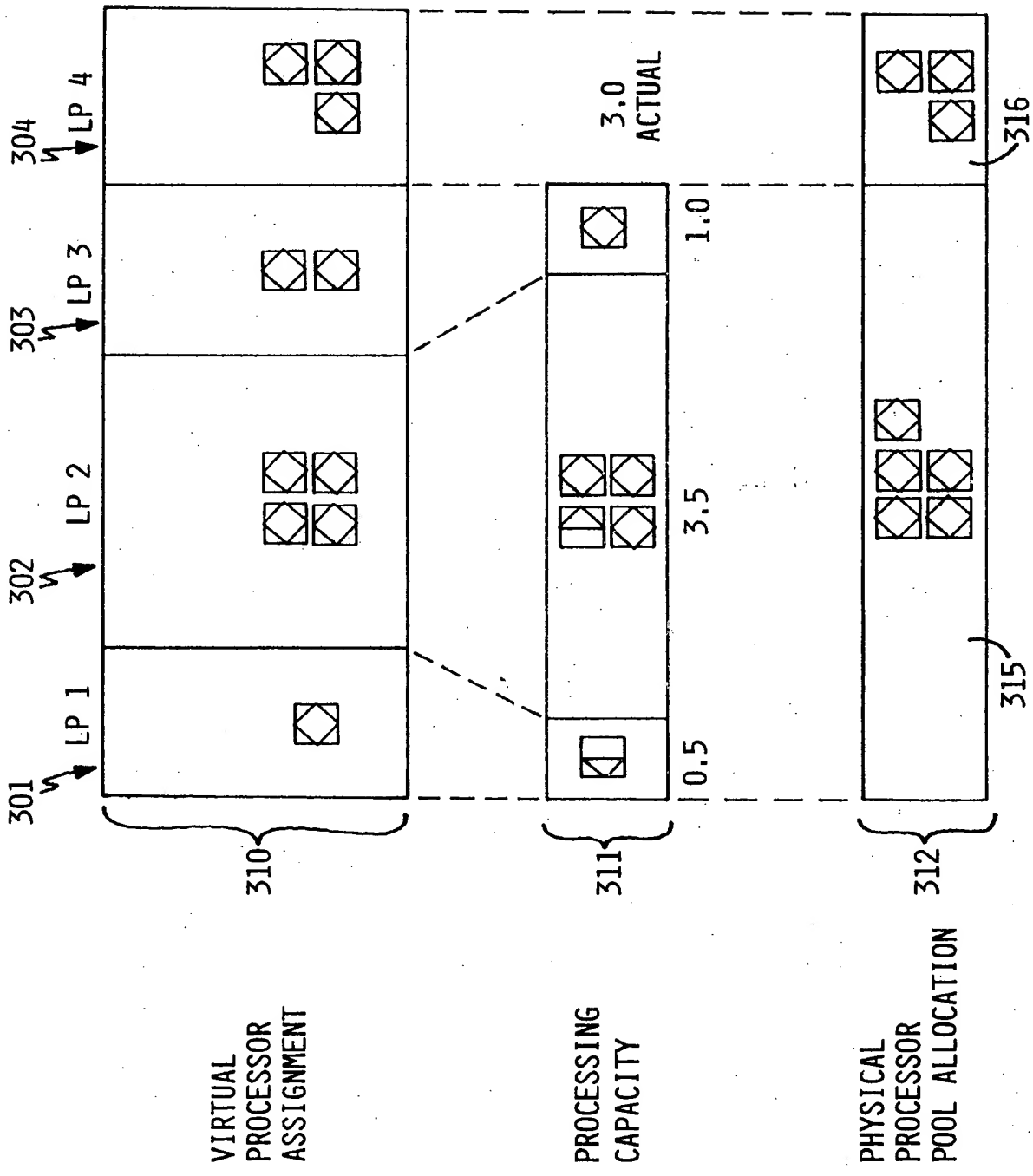
VIRTUAL PROCESSOR ASSIGNMENT
PROCESSING CAPACITY
PHYSICAL PROCESSOR POOL ALLOCATION
301
LP 1
302
LP 2
303
LP 3
304
LP 4
310
311
312
3.0 ACTUAL
1.0
3.5
0.5
315
316

FIG. 3

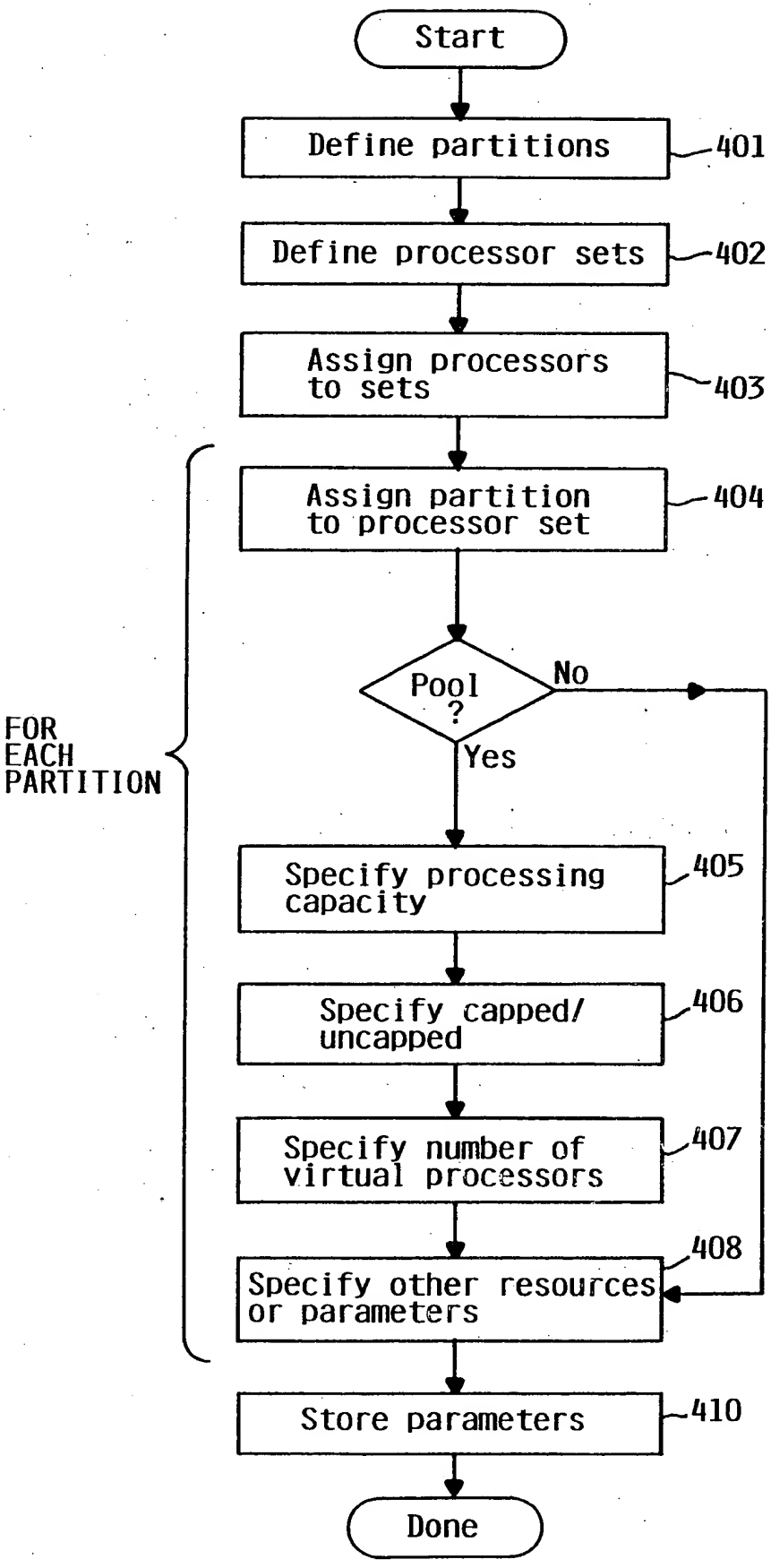
Start
Define partitions
401
Define processor sets
402
Assign processors to sets
403
Assign partition to processor set
404
Pool ?
No
Yes
FOR EACH PARTITION
Specify processing capacity
405
Specify capped/ uncapped
406
Specify number of virtual processors
407
Specify other resources or parameters
408
Store parameters
410
Done

FIG. 4

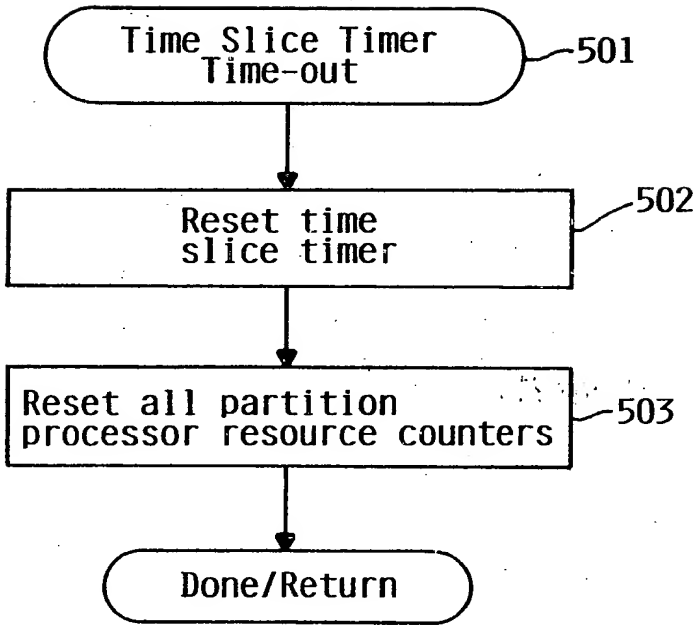
Time Slice Timer Time-out
501
Reset time slice timer
502
Reset all partition processor resource counters
503
Done/Return

FIG. 5A

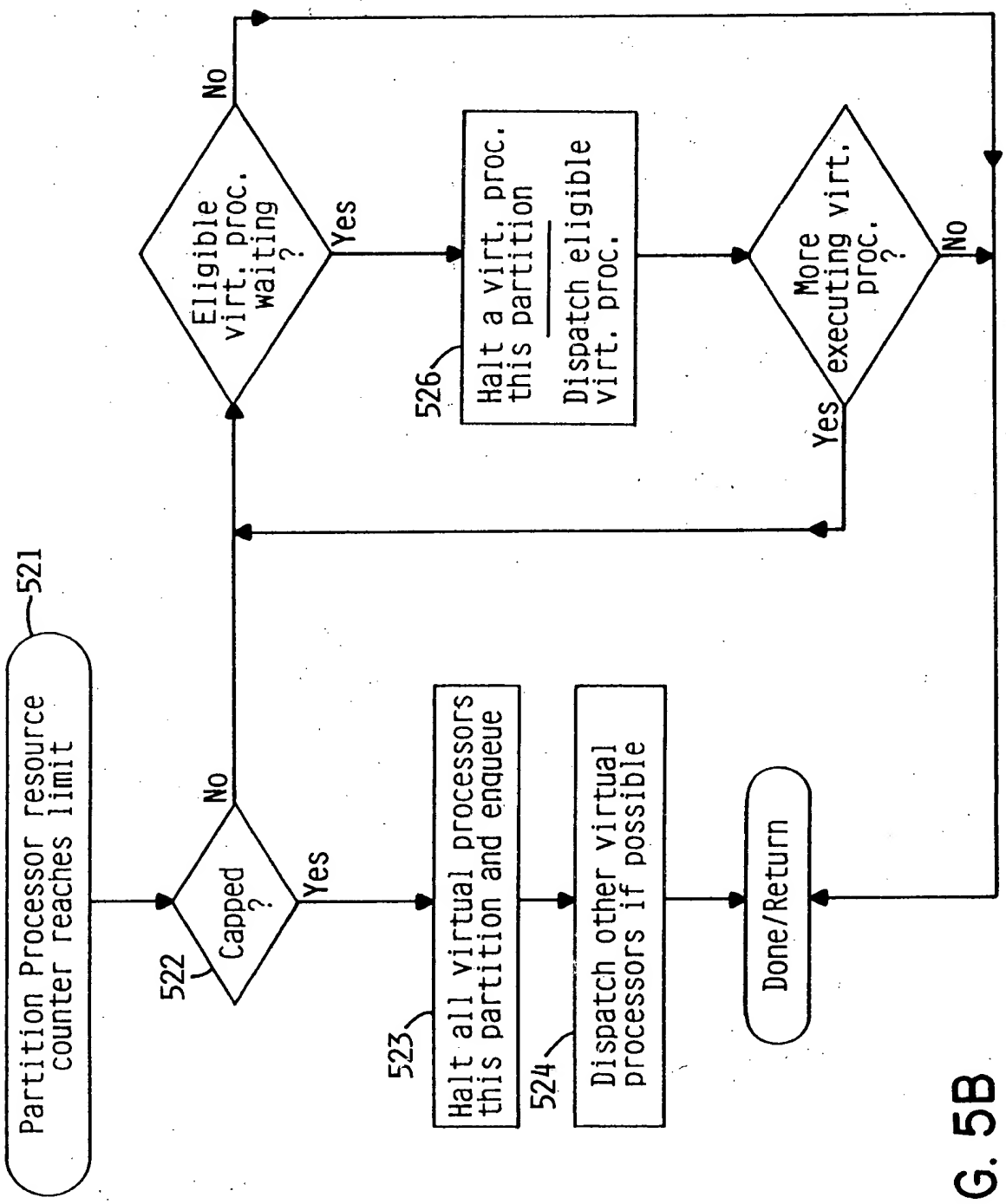
Partition Processor resource counter reaches limit
521
Capped ?
522
No
Yes
Halt all virtual processors this partition and enqueue
523
Dispatch other virtual processors if possible
524
Done/Return
Eligible virt. proc. waiting ?
No
Yes
Halt a virt. proc. this partition
Dispatch eligible virt. proc.
526
More executing virt. proc. ?
Yes
No

FIG. 5B

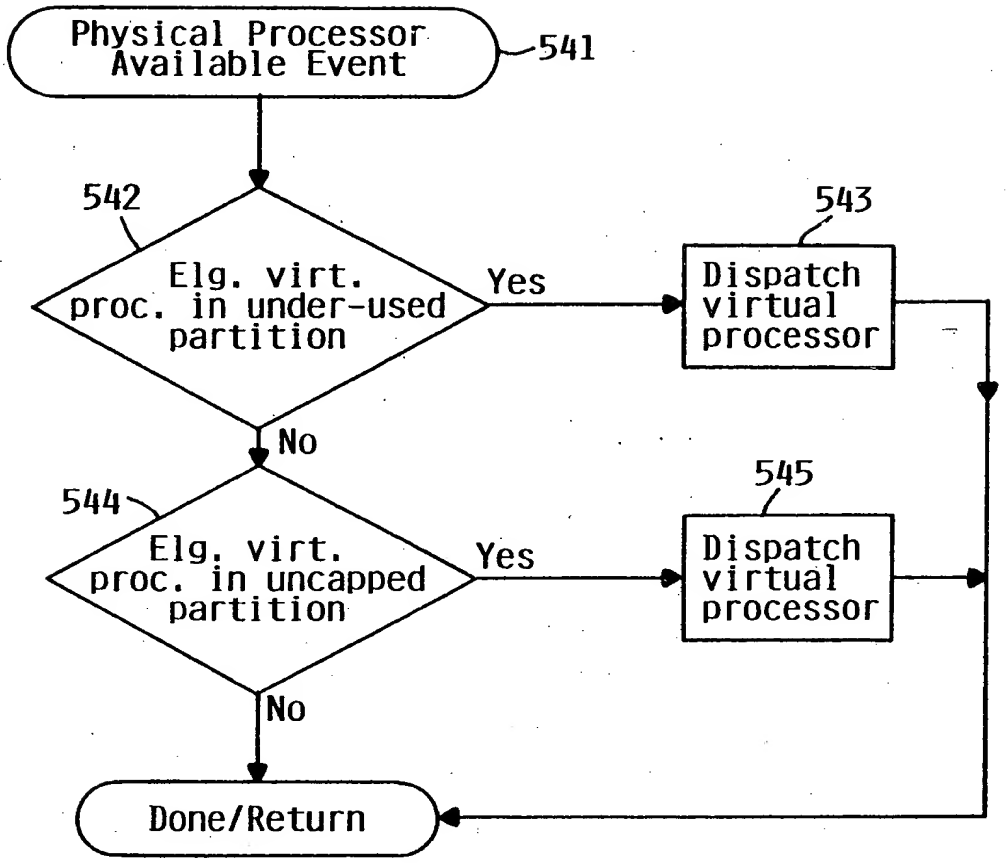
Physical Processor Available Event
541
542
Elg. virt. proc. in under-used partition
Yes
543
Dispatch virtual processor
No
544
Elg. virt. proc. in uncapped partition
Yes
545
Dispatch virtual processor
No
Done/Return

FIG. 5C

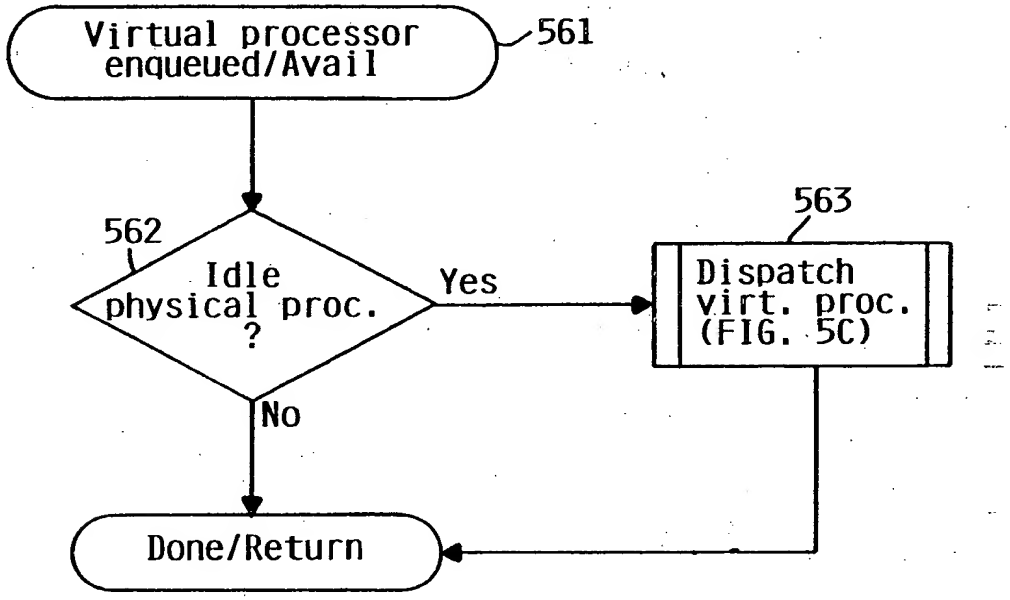
Virtual processor enqueued/Avail
561
562
Idle physical proc. ?
Yes
563
Dispatch virt. proc. (FIG. 5C)
No
Done/Return

FIG. 5D